REMARKS

Claims 1-54 were pending in this application. Claims 20-54 have now been withdrawn from consideration by the Examiner in view of an earlier restriction requirement. In view of the Examiner's earlier restriction requirement, Applicants retain the right to present claims 20-54 in a divisional application.

Claims 1 and 12 have been amended to require that (a) the series of new frame pixels is generated at a target computer pixel rate by the target computer for display on the target computer's monitor and (b) the receiving and comparing steps are repeated at least at the target computer pixel rate. Support for these amendments may be found on page 2, lines 8-24; page 25, lines 1-7; and page 22 lines 2-8, of the specification. Therefore, no new subject matter is believed to have been added by these amendments. No claims have been cancelled or added.

Restriction Requirement

Applicants note that the Examiner has made no comments with respect to the propriety of maintaining the restriction requirement in view of Applicants' Election with Traverse. Applicants reiterate that, at minimum, claims 20-25 of Group II should be examined with the claims of Claim 1, as claims 20-25 either directly or indirectly depend from claim 2 of Group I and only further limit the scope of the invention.

35 U.S.C. §102 Rejections

Claims 1, 2, 6-13, and 17 stand rejected under 35 U.S.C. § 102(b) for anticipation by United States Patent No. 6,738,100 to Hampapur et al. (hereinafter "the Hampapur patent").

The Hampapur patent discloses a system for detecting scene changes in a video stream in order to establish meta data describing the video. This meta data relates visual information about the content contained within the actual video. This is done by detecting differences based on frames and information about the data stream. The Hampapur patent utilizes a computer that stores a video clip in its memory. The software can then process the video clip to determine key scenes therein that will give an interested viewer information about the content of the video.

Amended independent claim 1 of the present invention is a method of capturing a new video frame generated by a target computer to be transferred over the internet or some other network as a video signal in order to permit the updating of a remote computer with the video output of the target computer. The method optimizes a video signal to a remote computer by sending only the pixels that have been changed. The method operates at a target pixel computer pixel rate to analyze signals at the target computer in realtime to create a display of the target display data on the remote computer. Each new video frame comprises a series of new frame pixels to be captured, the series including initial and final new frame pixels to be captured. The method performs a comparison of an initial new frame pixel to a corresponding reference frame pixel for each frame pixel. The step is repeated until all of the pixels are compared. The reference frame pixel is the corresponding pixel for the frame that was received directly prior to the present frame.

The present invention provides for comparison of each new frame to a reference frame, pixel by pixel in a KVM. It can perform this function despite the very large amount of data coming from the video signal. The Hampapur patent fails to disclose this pixel by pixel comparison. In the Hampapur patent two tests are discussed, the Chromatic Difference Measurement (See page 8, lines 31-41 of the Hampapur patent) and the Structure Difference Measurement (See page 9, lines 1-20 of the Hampapur patent). Neither of the two mentioned tests discloses pixel by pixel comparison.

Amended independent claim 1 now specifies that the pixel comparison take place at least at the target computer pixel rate. Support for claim 1 can be found page 7, paragraph [0100] of the present published application. This is an important aspect of the invention because without processing at least at the target pixel rate, the result would be inaccurate because some frame pixels would be missed. The Hampapur patent fails to disclose, and certainly does not teach, this element of the present invention. In fact, the Hampapur patent discloses a system and method to take in the entire frame first and do a key frame method comparison later.

Further, amended claim 1 of the present invention specifies that the target computer pixel rate is the rate at which the target computer generates video for display on its own monitor. Again, the Hampapur patent or any of the prior art of record does not operate in real time. Specifically, the video is read from the memory and transmitted to the scene change

detecting apparatus at a speed that a scene change detecting apparatus is able to handle. In other words, the Hampapur system does not deal with video signal generated by a computer for display on its own monitor. Rather, the Hampapur patent is dealing with a stream of video that is saved as data in memory, and can be read from memory at a speed slow enough to permit easy comparison between pixels. Therefore, the Hampapur patent fails to disclose this element of the present invention.

Claim 1 is patentable over the Hampapur patent and is believed patentable over the other prior art of record. Applicants believe that the subject matter of amended independent claim 12 is not anticipated by the Hampapur patent at least for the same reasons heretofore presented with regards to claim 1. Reconsideration of the rejections of claims 1, 2, 6-13, and 17 is respectfully requested.

35 U.S.C. §103 Rejections

Dependent claims 3 and 14-16 stand rejected under 35 U.S.C. § 103(a) for obviousness over the Hampapur patent in view of United States Patent No. 6,539,418 to Schneider et al.. Dependent claims 4-5, 18-19 stand rejected under 35 U.S.C. § 103(a) for obviousness over the Hampapur patent in view of United States Patent No. 6,539,418 to Schneider et al. and United States Patent No. 7,308,147 to Sano.

To establish a prima facie case of obviousness, an Examiner has the burden of identifying objective teachings in the prior art, or knowledge generally available to one of ordinary skill in the art, which would lead an individual to combine the relevant teachings of the references in the manner suggested by the Examiner. In re Fritch, 23 U.S.P.Q.2d at 1783; In re Fine, 5 U.S. P.Q.2d at 1598. Some articulated reason with rational underpinning to support the legal conclusion of obviousness must be provided for the Examiner to meet that burden. MPEP §2143.01, citing KSR International v. Teleflex Inc., 82 U.S.P.Q.2d 1385, 1396 (U.S. 2007) quoting In re Kahn, 441 F.3d 977, 986, 988, 78 U.S.P.Q.2d 1329, 1335, 1336 (Fed. Cir. 2006). This reason cannot be based on hindsight. MPEP (Rev. Sept. 6, 2007) §2145. Examples of rationales to support a prima facie showing of obviousness are provided in MPEP §2143:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;
(C) Use of known technique to improve similar devices (methods or products) in the same way;
(D) Applying a known technique to a known device (method or product) ready for improvement to yield predictable results;
(E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and
(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teaching to arrive at the claimed invention.

With regard to claim 3 and 14, the Examiner has argued that the benefit of remote control of a computer provides the motivation to combine the Hampapur patent and the Schneider patent. Applicants submit that the combination is impermissible since the unique advantage that the Examiner has cited is the unique end results of Applicants' invention, and the Examiner has therefore used improper hindsight to form the motivation to combine.

In addition, the combination would fail to provide a control system capable of controlling a computer as in the present invention. As shown in column 6, lines 5-10 of the Hampapur patent, the computer disclosed therein utilizes a Pentium Pro Processor running at 200 megahertz with 2 gigabytes of mass storage. It is impossible for such a processor to handle a video signal created by the target computer for display on its monitor because there would be just too much data, presented too fast. Specifically, the KVM is receiving a video signal generated by the target computer for display on the monitor of the target computer. Thus, the video capture that is performed by the present invention needs to be fast enough to deal with normal video resolutions and their corresponding pixel rates. The KVM of Hampapur cannot control the rate at which the video card or other video generation apparatus within the target computer generates a video signal. As discussed on page 5, line 7 of the specification of the present application, a typical video rate is over one billion bits per second. This is an enormous amount of data. In addition, as previously discussed, the Hampapur invention does not pertain to remote control display and therefore a combination would not provide the features as discussed above in regards to claim 1 and 12. The teachings of the Schneider do not overcome these deficiencies of

Hampapur. Likewise, the Sano patent applied against claims 4, 5, 18, and 19 does not account for the failure of Hampapur to practice the claimed invention.

In light of the aforementioned amendments and arguments made with respect to the anticipation rejections under the Hampapur patent, Applicants respectfully request that the Examiner withdraw the obviousness rejections. Accordingly, reconsideration of the rejections of claims 3, 14-16, and 4-5, 18-19 is also respectfully requested.

CONCLUSION

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of examined claims 1-19 are respectfully requested.

Respectfully submitted,

THE WEBB LAW FIRM

By _____

James J. Bosco
Registration No. 51,489
Attorney for Applicants
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219
Telephone: 412-471-8815
Facsimile: 412-471-4094
E-mail: webblaw@webblaw.com